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ABSTRACT

Originally developed for the Department of Defense Schools (DoDDS) system, this learning package on the role of metacognition in reading to learn is designed for teachers who wish to upgrade or expand their teaching skills on their own. The package includes a comprehensive search of the ERIC database; a lecture giving an overview on the topic; the full text of several papers on the topic; copies of existing ERIC/RCS publications on the topic; a set of guidelines for completing a goal statement, a reaction paper, and an application project; and an evaluation form. (SR)

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Learning Package #20

Role of Metacognition in Reading to Learn

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OVERVIEW

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Each learning package contains (1) a topic overview: a four-to-six page stage-setter; (2) in most cases, a digest of research: an ERIC summary of research on the topic written by a specialist; (3) a goal statement and a survey form; and (4) an extensive annotated bibliography of ERIC references.

Graduate-level university credit is available. For further information contact Indiana University School of Continuing Studies, Owen Hall #204, Bloomington, Indiana 47405. Enrollment in each course will be limited.

Role of Metacognition in Reading to Learn

(All references fully documented in enclosed bibliography)

by Norma Collins

Lecture

Researchers consistently posit that metacognition plays an important role in reading. Authors Tei and Stewart, in a document entitled, "Effective Studying from Text: Applying Metacognitive Strategies," define metacognition as ..."having knowledge (cognition) and having understanding, control over, and appropriate use of that knowledge (metacognition)" (1985, p.46). Thus, metacognition involves both the conscious awareness and the conscious control of one's learning. In this lecture, the implications of metacognition will be discussed as it relates to an important type of reading, reading to learn.

Reading Education Report No. 40, by authors Armbruster, Echols, and Brown (1983), summarizes research on metacognition and provides the basis for the following discussion. The document presents reading to learn from a metacognitive perspective as it relates to four variables: texts, tasks, strategies, and learner characteristics.

The first variable, text, refers to the textual features of learning materials which influence comprehension and memory. Factors such as arrangement of ideas in texts, vocabulary, syntax, clarity of author's intentions, and reader's interest and familiarity

with a text all have an effect on students' learning. Salient findings from the research include three basic points:

1. Text structures influence learning even if the learner is unaware of their effect;

2. Knowledge of the effect of text structures on learning is dependent on age and ability;

3. A reader can optimize learning by becoming aware of text structures and the resultant effect they have on learning (Armbruster, et. al.).

Knowledge of text structure is critical for reading to learn; it is requisite for efficient use of study time. By detecting the organizational patterns or structures of texts, students can observe how authors arrange ideas and determine which kinds of structures are used to interrelate ideas. The article in your package by K. Denise Muth addresses structures that are used most frequently in textbooks. The author presents three strategies designed to help students read and comprehend informational texts. These include hierarchical summaries, conceptual maps, and thematic organizers designed to raise students' awareness of structures of text.

A separate learning package deals with reading in the content area and the role of textual features in reading expository texts; you may want to cross-reference that learning package for additional information. Authors Stewart and Tei similarly address the need for students to recognize meaningful elements in texts.

This article is also in your package and contains specific activities that can be employed to correct comprehension failures.

Research cited in the previously mentioned Education Report suggests that younger and less mature readers do not concentrate on textual features because they are not aware of the impact text structures have on learning. Researchers contend that knowledge of the effect of text structures on learning is prerequisite to conscious control of strategies. Teachers need to instruct students to use text structure to enhance learning.

Another area of research in the development of metacognition of text features is related to the recognition of inadequacies in prose. Ambiguous words or confusions within the text affect cognitive processing. Experienced readers will adjust their reading rate for anomalous texts and may return to an inconsistent sentence or passage several times, comparing what they know with what is written in the text. Older and more fluent readers are more aware of text inconsistencies and can judge whether or not their comprehension is altered because of them. Strategies suggested by Stewart and Tei will help students identify internal text inconsistencies and deal with them appropriately.

Another variable of metacognition in reading to learn pertains to the task that the reader is required to perform. For example, locating a specific detail in a text requires a different process than that needed to write a critical analysis of the text. As

with other facets of metacognition, mature and immature learners differ with respect to their knowledge of, and ability to control, task variables (Armbruster, et al.).

Fundamental to any task in reading is the derivation of meaning from the text. In order for learning to occur, students must be aware that the purpose of reading is to construct meaning. The reader must learn how to adapt reading behavior to specific tasks. The article in your package by Stewart and Tei outlines several concrete steps you can take to assist students in adjusting their reading to specific tasks.

A related index of metacognitive development with regard to the task is the reader's ability to accurately predict his or her performance on the task. In a study cited in the Education Report on the role of metacognition in reading to learn, researchers reported that third and sixth graders differed in their ability to rate their confidence in their performance on a multiple-choice test that followed a reading selection. The authors pointed out that the younger readers claimed there was no way to predict accuracy, while sixth graders indicated there were cues which gave them information about how well they performed. These findings support the notion that both age and reading experience are important variables in metacognition of reading.

An additional category of metacognitive knowledge and control involves knowing how to remedy comprehension failures.

It is not enough to be aware of one's understanding or failure to understand; a learner must be able to self-regulate his or her reading process in order to read for comprehension. The reader needs knowledge about metacognition strategies.

Researchers cite two different categories of strategies: fix-up strategies to resolve comprehension failures and studying strategies to enhance storage and retrieval when comprehension failure is not necessarily an issue (Armbruster, et. al). Stewart and Tei discuss several strategies for improving comprehension. These include forming a mental image, rereading, adjusting the rate of reading, searching the text to identify unknown words, and predicting meaning that lies ahead.

The research indicates that readers use many strategies, but a distinction exists between good readers and poor readers. Good readers tend to use the most effective strategy that leads to a thorough processing of the text. The research also supports that readers can be taught to develop self-awareness and control of learning.

Study strategies are important in reading to learn and can be applied to enhance text processing. Common studying strategies include underlining, outlining, notetaking, summarizing, and self-questioning. Many of these strategies are complex and best handled by older and more experienced readers. Several studies reported improved performance by junior high and high

school students who were trained to use a particular studying strategy.

The decision you make about teaching metacognitive skills will be based on what serves your students best. Applying some of the strategies presented by authors Schmitt and Baumann may be more appropriate for younger, inexperienced readers (see package). The authors describe how to incorporate comprehension strategies into basal reading instruction to promote metacognition before, during, and after reading.

A final category of metacognition in reading to learn is the awareness of the learner of his or her own characteristics -- such as background knowledge, degree of interest, skills, and deficiencies -- and of how they affect learning. Again, the reader must be able to take that awareness and translate it into a change in reading behavior. Research suggests that successful students tend to relate information in texts to previous knowledge; less successful students showed little tendency to use their knowledge to clarify the text at hand.

Thus, learner characteristics, like texts, tasks, and strategies, are age and experience dependent. The development of metacognition appears to be linked to proficiency in learning. A related conclusion about metacognitive development is that knowledge precedes control. The researchers suggest that learners must first become aware of structures of text, as well as

knowledge of the task and their own characteristics as learners, before they can strategically control the learning process to optimize the influence of these factors (Armbruster, et al).

Awareness of metacognitive skills can be gleaned through instruction. Teachers can help their students learn from reading; they can encourage students to take an active role in reading. To quote the ERIC Digest in this package... "It is not enough for a teacher to be aware of the dimension of comprehension awareness. Development of the student's own awareness is crucial" (Standiford, 1984). The goal is to develop active, independent learners. Integrating metacognitive skills into classroom instruction can make that goal attainable.

ERIC® Digest

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Increasing Comprehension by Activating Prior Knowledge

by William L. Christen and Thomas J. Murphy

The Research

Research has been conducted to determine the value of providing activities or strategies to assist in providing students with ways to activate their prior knowledge base. Studies looked at three possibilities: (1) building readers' background knowledge; (2) activating readers' existing background knowledge and attention focusing *before* reading; and (3) guiding readers *during* reading and providing review *after* reading.

It appears that when readers lack the prior knowledge necessary to read, three major instructional interventions need to be considered: (1) teach vocabulary as a prereading step; (2) provide experiences; and (3) introduce a conceptual framework that will enable students to build appropriate background for themselves.

Preteaching vocabulary (to increase learning from text materials) probably requires that the words to be taught must be key words in the target passages (Beck, *et al*, 1982; Kameenui, Carnine, *et al*, 1982), that words be taught in semantically and topically related sets so that word meaning and background knowledge improve concurrently (Beck et al., 1982; Stevens, 1982), and that only a few words be taught per lesson and per week (Beck et al., 1982; Kameenui et al., 1982; Stevens, 1982). To be an effective strategy, an extensive and long-term vocabulary strand accompanying a parallel schematic or background-knowledge-development strand is probably called for.

Research on *enriching background knowledge* has demonstrated that activating such knowledge increases comprehension. Graves and his associates (1980; 1983) developed previews for short stories that had, as one component, the building of prior knowledge important to understanding the selection. Data indicated that reading the previews before reading the stories increased students' learning from stories by a significant and impressive amount. Stevens (1982) increased learning from text compared with a control group for 10th-grade students reading a history passage by teaching them relevant background information for that passage. Hayes and Tierney (1982) found that presenting background information related to the topic to be learned helped readers learn from texts regardless of how that background information was presented or how specific or general it was. Alvarez (1990) used case-based instruction to develop students' abilities to assemble and incorporate different knowledge sources in memory. He taught them how to employ thematic organizers and hierarchical concept mapping in their reading.

Additionally, scant attention is paid to the role of the reader's schemata, or background knowledge, when learning from text (Tierney & Pearson, 1985). Yet research clearly emphasizes that for learning to occur, new information must be integrated with what the learner already knows (Rumelhart, 1980).

It appears that providing students with strategies to activate their prior knowledge base or to build a base if one does not exist is supported by the current research. It is our contention that this is one way teachers can have a positive influence on comprehension in their classrooms.

For example, Reutzel and Morgan (1990) advocate two pedagogical alternatives for teachers who wish to improve students' comprehension of causal relations which often are implicit in content area textbooks. Teachers may rewrite the text to make the cohesion relations explicit (a daunting task), or they may assist students in building, modifying, or elaborating their background knowledge prior to reading expository texts. Miholic (1990) outlines the construction of a semantic map for textbooks which he recommends for use at adult, secondary, and college level. For a class of gifted seventh grade students, Davis and Winek (1989) developed a project for building background knowledge so that the students could generate topics for writing articles in history. The teachers devoted one class period a week for eight weeks to various group activities to build background knowledge, culminating in prewriting activities focused on brainstorming for the eighth week. The articles were then written by the students at home.

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Classroom Implications

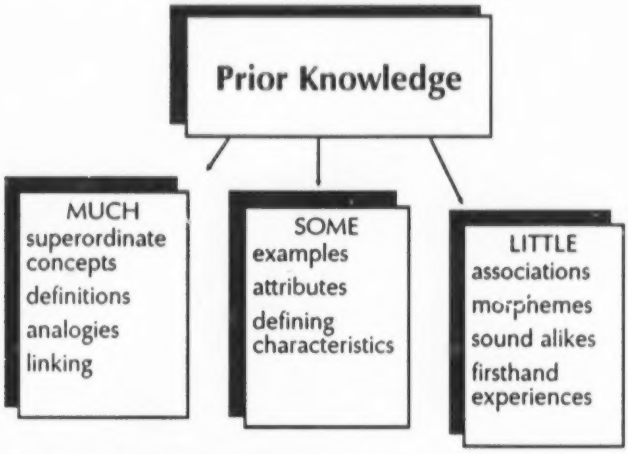
Engaging students in prior knowledge experiences becomes a form in classrooms where teachers value understanding what knowledge students possess. We know that prior knowledge is an important step in the learning process. It is a major factor in comprehension: that is, making sense of our learning experiences. Brain-based research confirms the fact that the learning environment needs to provide a setting that incorporates stability and familiarity. It should be able to satisfy the mind's enormous curiosity and hunger for discovery, challenge, and novelty. Creating an opportunity to challenge our students to call on their collective experiences (prior knowledge) is essential. Through this process we move students from memorizing information to meaningful learning and begin the journey of connecting learning events rather than remembering bits and pieces. Prior knowledge is an essential element in this quest for making meaning.

Level of Prior knowledge

Students generally fall into three categories: *much*, *some*, or *little* prior knowledge. In each instance, the teacher will make specific instructional decisions based on what is discovered in the prior knowledge part of the lesson. To check out what prior knowledge exists about a topic, idea, or concept, you may choose to do some of the following activities:

- *Brainstorm* the topic. Write all the information solicited from the students on the chalkboard, a piece of paper, or transparency.
- *Ask* specific and/or general questions about the topic. See what responses are given.
- *Pose* a *problem* or a *scenario*. Based on this description, find out what the students know about the idea presented.

Once the data is collected, a decision about the appropriate forms of instruction can be made. The following diagram can be helpful:



Teachers should remember to

(1) Present information which builds:

- **Background ideas**
- **Concepts**
- **Principles**

(2) Show, don't tell through—

- **Demonstrations**
- **Multi-media**
- **Graphics**

(3) Use outside resources, trips and speakers

(4) Tell about topic from your experience

(5) Use any combination of the above!

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Metacomprehension

Teachers make many instructional decisions based on their assessments of student comprehension. "Excellent" students, for example, are often given enrichment materials, so that they won't be bored while the teacher works with other students; "poor" students, on the other hand, are often given remedial materials to help them "catch up." Almost always, such decisions are based on what a student knows or doesn't know relative to the teacher's questions. Although assessment of a student's comprehension is necessary and important, it is not always sufficient. There is another dimension that teachers might consider: the student's metacomprehension, or awareness of his or her own understanding.

What is Metacomprehension?

Who of us has not had the experience of reading a book and becoming aware that we have not understood the content of the last few pages? At the point of that awareness, our metacomprehension was very high—we *knew* we hadn't processed anything we'd just read. On the other hand, while we were reading absentmindedly, our metacomprehension was very low—we had been unaware of our own level of understanding. Metacomprehension, then, is the awareness of and conscious control over one's own understanding or lack of it.

Regardless of whether or not students are "doing well" (by whatever grading scheme we use), they may or may not be aware of their own degree of understanding. Students with high metacomprehension are either those who know they understand when, in fact, they do, or those who know they do not understand when, in fact, they do not. Their awareness of their understanding accurately reflects their comprehension.

Students have inaccurate or low metacomprehension if they are uncertain, or if they are unaware, that they do or do not understand. Poor metacomprehension may be exhibited in different ways: there are students who are sure they just "blew" tests on which they subsequently get top scores, students who believe that they have the material "down pat" and perform poorly, and students who just haven't thought about their own state of understanding. When we put these comprehension/metacomprehension dimensions together, we can divide our students into four groups.

Comprehension: high	Comprehension: low	Metacomprehension
know and are aware that they know (1)	do not know and realize they do not know (2)	high
know but think they don't know (3)	do not know but think they do know (4)	low

From *Computers in the English Classroom: A Primer for Teachers.* Sally N. Standiford, Kathleen Jaycox, and Anne Auten. Urbana, Ill.: ERIC Clearinghouse on Reading and Communication Skills and National Council of Teachers of English, 1983, 17. ED 228 654.

Why Is Metacomprehension Important?

One of the primary goals of instruction is to help students become efficient and effective learners—to have them become responsible for their own learning. Effective learning requires awareness of one's understanding or lack of it, as well as knowing what to do when one fails to understand. Baker and Brown (ED 195 932) have identified three main reasons for comprehension failures: (1) the learner does not have enough information about the topic to interpret the message (written or oral); (2) the learner has the appropriate schemata, or prior knowledge, but there aren't enough clues in the message to suggest them to the learner; or (3) the learner interprets the message consistently, but the interpretation is different from the one intended by the author or speaker. It is very unlikely that students in the third group will take remedial action, since they won't realize that their comprehension has failed. Students who fail to construct consistent interpretations are more likely to attempt activities to clarify their understanding. "Such self-awareness is a prerequisite for self-regulation, the ability to orchestrate, monitor, and check one's own cognitive activities," according to Brown, Campione, and Day (ED 203 297, 26).

What Can English/Language Arts Teachers Do?

Asserting that sophisticated reading is a complex, acquired skill, Stewart and Tei (37) state that readers need to learn how to engage in certain activities to achieve the goals of reading. One such goal, for example, is reading to study. This may involve skills such as recognizing and retaining main points, rereading important sections, making adjustments in reading rate, and self-testing to monitor the success of various strategic activities. Awareness of the understanding and use of these skills is necessary to metacomprehension.

Schallert and Kleiman (ED 172 189) have identified some strategies reading teachers can use to help students' metacomprehension: (1) focusing the student's attention on the main ideas; (2) asking students questions about their understanding to help them monitor their comprehension; and (3) relating the student's relevant prior knowledge to the new information. As teachers we need to teach students how to use such activities and encourage their independent use.

For students with low comprehension-high metacomprehension (Cell 2 of grid), teacher questions and feedback designed to help students apply appropriate studying strategies and techniques can be effective. These students do not gain from those teacher responses that simply indicate that they are wrong—they already know that. As teachers better understand these strategies and techniques, they can train students to use them more effectively. For example, instructing students to summarize a reading without giving them any criteria for development of a summary does a disservice to those students who are aware that they don't know how to construct such a summary.

Students with high comprehension-low metacomprehension (Cell 3) need consistent, positive reinforcement, both verbal and written. Although some research has demonstrated that the positive reinforcement of confirming correctness for some students is ineffective, regular positive reinforcement is effective for this subset of students, since their lack of confidence is critical.

The approach for students with low comprehension-low metacomprehension (Cell 4) should be to focus on the metacomprehension dimension first, breaking through their false sense of understanding rather than teaching them content. One might ask these students questions that help them recognize a contradiction between what they really know and what they *think* they know, but don't. For example, a student who draws an illogical inference from a reading passage due to incomplete background knowledge may be unconvinced if simply told that he or she is wrong. Such a student could be confronted with his or her misunderstanding by being shown similarities and/or differences between the passage in question and analogous material more familiar to the student.

How Can Teachers Evaluate Student Metacomprehension?

One of the simplest ways to assess a student's awareness of understanding is to ask the student to rate the certainty that he or she has answered correctly or incorrectly. Students with good metacomprehension will respond that they are relatively certain that their correct answers are correct or that their incorrect answers are incorrect. Poor metacomprehenders will have a mismatch between their answers and their confidence ratings. A word of caution: younger students frequently respond positively when questioned on how sure they are of what they know, regardless of the truth of their assertions (Baker and Brown 1980). More direct evidence of metacomprehension for these students might come from monitoring the self-correction of their errors during such learning activities as reading.

"The ability to reflect on one's own activities . . . is a late developing skill with important implications. . . . If . . . the child is not aware of his own limitations as a learner or the complexity of the task at hand, then he can hardly be expected to take preventive actions in order to anticipate or recover from problems" (Baker and Brown ED 195 932, 3). It is not enough for a teacher to be aware of the dimension of comprehension awareness. Development of the student's own awareness is crucial. To better serve their students, English language arts teachers should regularly and actively integrate metacomprehension strategies in their classrooms.

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University of Illinois

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Task #1

Goal Statement

Your Name:_____

Course #:_____

Learning package:_____

The purpose of writing a goal statement is to create an expectation for yourself, to establish a purpose that you can check when you have finished reviewing the package of materials. It should be used in conjunction with your reaction statement--the commentary that you will make after working your way through the materials in the learning package.

Directions: This is a pre-reading activity. Think about the topic of this package and then look at the various materials, primarily reviewing their headlines and subheads. What does that review prompt you to want to discover through this package?

Write a goal statement of no more than one paragraph that includes the questions that you want answered or the kinds of applications that you hope the package will help you accomplish in your work. Attached please find examples of representative goal statements submitted by former students.

Mail a copy of your goal statement to your instructor. Please keep a copy for yourself because your reaction statement should be based partly on the goal statement.

My Goal Statement for this Package

Please mail a copy of this form to:

Carl B. Smith
150 Smith Research Center
Indiana University
Bloomington, IN 47408-2698

Examples of Goal Statements

It is my expectation that this learning package will direct me in new directions so that I may improve my instruction in the area of vocabulary. I would like to know when it is best to introduce new vocabulary words. I would also like to gain information about new methods one might use when introducing new vocabulary. I expect to read about some of the newest research related to vocabulary instruction. It is also expected that tested methods will be described and examined. I would hope that these articles would help me improve how I teach so that my students will benefit and become better readers.

Following the study of this package, I expect to increase my understanding of computer usage in reading development, learn how to integrate computers into reading and writing instruction for learning impaired students, and make decisions on the usefulness of computer games in the classroom.

Following completion of this package I intend to:
1)Identify the components of a formal reading program evaluation.
2)Analyze the characteristics of an effective reading program.
3)Develop evaluation strategies that will improve the monitoring of my program objectives.

Task #2

Reaction Statement

You are asked to type a four-page reaction to this learning package as a way of firming up your sense of what you find interesting, important, or beneficial in this group of materials. You should construct this reaction with your previously established goal statement in mind.

Given below are a number of prompts to indicate the kinds of questions that you might wish to answer in developing this reaction. You may use other questions than those that are here listed. We anticipate that your reaction will be approximately four typewritten, double-spaced pages. Please use the following format in heading your paper.

Reaction

Your Name:_____

Course #:_____

Learning Package:_____

Reaction Prompts

1. Were your goals realized, and how do you know? (Refer to your goal statement.)

2. What important or beneficial ideas did you find in these materials? (Please cite the articles.)

3. Are there trends or concerns in the materials that bother you? Are there those that you agree with? Discuss. (Please use the annotated bibliography and cite ideas from it.)

4. What ideas did you want to try in your daily work world? Describe how you could apply these ideas?

Application Project

If you decide to use this topic for one of your two application projects, you may want to spend more time thinking about ways that you could explore one or more of these ideas in your work.

When you have finished your statement, please mail it to:

Carl B. Smith
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Task #3

Application Project

As you select your two application projects, use the following guidelines:

1. **Formulate a question** that you would like to answer regarding this topic. (For example, can my slow readers use some of the self-monitoring strategies discussed in these materials?) A question often helps to clarify the kinds of information that you will collect or the kinds of evidence that you will use to convince a reader that you are pursuing an interesting question.

2. **Describe with as much detail** as is needed for a reader to understand what you did, what materials you used, what major procedures you used, what evidence you were looking for, in order to answer your question.

3. **Gather evidence** from your students or from teachers to show samples of the kinds of work or the kinds of interactions that were taking place. These samples may be your written observations, sample student papers, photographs, activity sheets, book titles, statistical data, or any other kind of evidence that demonstrates the reality of your inquiry.

4. **Write a summary** of your plan and of your conclusions. The summary should be coherent and clear so a person who was not on site can understand what you attempted and can appreciate the conclusions that you drew.

5. **Send a report** that includes a summary of your plan, sample evidence of what you found, a brief analysis of the evidence, and the conclusions that you

6. **Provide a cover page** that gives your name, address, course number, topic of learning package, and topic of your project. We will mail you a critique of your work. Send your report to:

   Carl B. Smith
   150 Smith Research Center
   Indiana University
   Bloomington, IN 47408-2698

Course Number_____ **Date**_____

Package Title_____

Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. This package will help me do my job better.					
2. The pace of the package was too fast.					
3. The package's directions were confusing.					
4. It was easy to follow the directions given in the package.					
5. The package was too easy.					
6. The package was too long.					
7. The package should include more articles and documents to read.					
8. I didn't know the meaning of many words used in the package.					
9. The lecture explicated the topic of the package.					
10. The package's objectives were clear from the start.					
11. The package's teaching points were clear.					

What did you like best about the package?

What did you like least about the package?

How would you improve the package?

Please list other topics you would be interested in studying through our program.

Name (optional)_____

Position_____

Years Taught_____

Please mail a copy of this form to:

Carl B. Smith
150 Smith Research Center
Indiana University
Bloomington, IN 47408-2698

ERIC/RCS

Selected Abstracts from the ERIC Database

ERIC Clearinghouse on Reading & Communication Skills
Indiana University
Bloomington, Indiana
(812) 855-5847

BEST COPY AVAILABLE

Sample ERIC Abstract

AN ED289160
AU Binkley,-Marilyn-R.; And-Others
TI Becoming a Nation of Readers: What Parents Can Do.
CS Heath (D.C.) and Co., Lexington, Mass,; Office of Educational Research and Improvement (ED), Washington, DC.
PY 1988
AV What Parents Can Do, Consumer Information Center, Pueblo, CO 81009 ($.50).
NT 40 p.; For Becoming a Nation of Readers: The Report of the Commission on Reading, see ED 253 865.
PR EDRS Price - MF01/PC02 Plus Postage.
DE Beginning-Reading; Literacy-Education; Parent-Attitudes; Parent-Child-Relationship; Preschool-Children; Primary-Education; Reading-Aloud-to-Others; Reading-Attitudes; Recreational-Reading; Written-Language
DE *Literacy-; *Parent-Influence; *Parent-Participation; *Reading-Instruction; *Reading-Processes
ID Reading-Motivation
AB Intended for parents and based on the premise that parents are their children's first and most important teachers, this booklet is a distillation of findings from the 1984 report of the Commission on Reading, "Becoming a Nation of Readers." The introduction reiterates the Commission's conclusions (1) that a parent is a child's first tutor in unraveling the puzzle of written language; (2) that parents should read to preschool children and informally teach them about reading and writing; and (3) that parents should support school-aged children's continued growth as readers. Chapter 1 defines reading as the process of constructing meaning from written texts, a complex skill requiring the coordination of a number of interrelated sources of information. Chapter 2, on the preschool years, focuses on talking to the young child, reading aloud to the preschooler, and teaching children about written language. The third chapter, on beginning reading, counsels parents on what to look for in good beginning reading programs in schools, and how to help the child with reading at home. The fourth chapter, on developing readers and making reading an integral part of learning, offers suggestions for helping the child succeed in school and for encouraging reading for fun. The afterword calls on teachers, publishers, and school personnel, as well as parents, to participate actively in creating a literate society. The booklet concludes with a list of organizations that provide practical help or publications for parents.

Interpretation of ERIC Abstract Field Identifiers

AN ERIC accession number (Use this number when ordering microfiche and paper copies.)
AU Author(s)
TI Title
CS Corporate source
PY Actual or approximate publication date
AV Source and price (availability)
NT Pagination and additional information (such as legibility or related documents)
PR Indicates availability of document from the ERIC Document Reproduction Service
DE Descriptors-indexing terms from the *Thesaurus of ERIC Descriptors* which indicate important concepts in the document
ID Identifiers-indexing terms not included in the *Thesaurus of ERIC Descriptors*
AB Summary

AN: ED228629
AU: Alvermann,-Donna-E.
TI: Story Constituents and Children's Strategic Preferences.
PY: 1983
NT: 8 p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Canada, April 11-15, 1983).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Basal-Reading; Cognitive-Processes; Grade-2; Primary-Education
DE: *Classification-; *Metacognition-; *Reading-Comprehension; *Reading-Processes; *Reading-Research; *Reading-Skills
AB: A study was conducted (1) to determine if children select some strategies more frequently than others to comprehend story categories, and (2) to find out if children are able to talk about what they are thinking and doing as they read stories from a basal reader. Subjects, 30 second grade students reading at grade level, were randomly assigned to read one of two narratives, responding orally at predetermined points. Children's retellings were transcribed and scored. Results indicated that the children were competent in reporting what they were thinking and doing as they read the basal. Specifically, when students read statements from either the initiating event category or the setting category, they reported using elaborative strategies (inference, personal identification, and image); by contrast, a significantly greater number of nonelaborative strategies (literal/paraphrase, self-interrogation, and no response) was reported for attempt, internal response, and reaction story categories. No significant differences in the use of the two kinds of strategies were found for the consequence strategy. (JL)

AN: ED228617
AU: Armbruster,-Bonnie-B.; And-Others
TI: The Role of Metacognition in Reading to Learn: A Developmental Perspective. Reading Education Report No. 40.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1983
NT: 32 p.; This paper appears in Kretschmer, R. E., Ed., Reading and the Hearing-Impaired Individual. Volta Review, 1982, 84, p45-56.
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Cognitive-Processes; Elementary-Secondary-Education; Knowledge-Level; Reading-Comprehension; Reading-Materials; Student-Characteristics
DE: *Learning-Processes; *Learning-Theories; *Metacognition-; *Reading-Instruction; *Reading-Research
AB: Noting that metacognition plays a vital role in reading, this report summarizes research dealing with the development of metacognition in an especially important type of reading--reading

to learn. The report is organized around four categories of metacognitive knowledge and control: (1) the text, (2) the task to be performed by the learner as evidence of learning, (3) the learner's strategies, and (4) the learner's characteristics. Among the conclusions presented are that the development of knowledge appears to precede the development of control, younger and poorer readers tend to be deficient in both knowledge and control of the four variables, and instruction in metacognitive skills can have a positive effect on learning outcomes. (FL)

AN: ED266426
AU: Cohen,-Suzette-F.
TI: Comprehension Monitoring Strategies for Whole Text.
PY: 1985
NT: 12 p.; Paper presented at the Annual Meeting of the College Reading Association (29th, Pittsburgh, PA, October 24-26, 1985).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Questioning-Techniques; Reading-Strategies; Secondary-Education
DE: *Metacognition-; *Peer-Teaching; *Reading-Comprehension; *Reading-Improvement; *Teaching-Methods
AB: Unskilled readers can become skilled readers and learners of whole text, if they are given instruction in effective strategies and taught to monitor and check their comprehension while reading. Two strategies for comprehension monitoring are self-questioning and reciprocal teaching. Questions students can ask before reading concern the concepts introduced and how the material was organized. Questions students can ask while moving from one subsection of text to the next concern understanding the main ideas in the previous section, and how they relate to those in the next. Questions students can ask after reading concern summarizing, listing main points, and ascertaining the material's significance. With reciprocal teaching, a student chosen randomly, following behavior modeled by the teacher, paraphrases or summarizes the content of the reading assignment and discusses difficulties in comprehension. The student then provides main idea sentences, and may predict test questions from the highlighted information. Inferences may be discussed relating the information to the students' lives and society, and personal experiences with the topic may be shared. (Information for student coding of major and supporting ideas in the text is included.) (HTH)

AN: ED292070
AU: Dermody,-Margaret
TI: Metacognitive Strategies for Development of Reading Comprehension for Younger Children.
PY: 1988
NT: 11 p.; Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education (New Orleans, LA,

February 17-20, 1988).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Processes; Grade-4; Intermediate-Grades; Reading-Instruction; Reading-Research
DE: *Metacognition-; *Reading-Comprehension; *Reading-Improvement; *Reading-Strategies
AB: A study investigated the development of metacognitive strategy instruction on standardized reading comprehension measures with fourth grade students. Forty-one subjects were assigned to one of three criterion reading groups, based on pretest scores using the Stanford Diagnostic Reading Test (SDRT) and the Wide Range Achievement Test: (1) "GOOD/GOOD" (students with above average reading comprehension and above average word recognition), (2) "GOOD/POOR" (students with below average reading comprehension but above average word recognition), and (3) "POOR/POOR" (students with below average reading comprehension and word recognition). The subjects were involved in three phases of instruction using the direct teaching method: (1) students were first taught individual strategies of prediction, clarification, question generating, and summarizing; (2) the researcher then used the direct teaching model with the reciprocal teaching methodology; and (3) finally, reciprocal teaching methods were applied within the content area of social studies. Results indicated that for the "GOOD/POOR" group, metacognitive strategy training with reciprocal teaching significantly influenced reading comprehension, suggesting that for this type of reader direct instruction of needed strategies can improve reading comprehension. (Twenty-three references are appended.) (MM)

AN: EJ341102
AU: Fredericks,-Anthony-D.
TI: Mental Imagery Activities to Improve Comprehension.
PY: 1986
JN: Reading-Teacher; v40 n1 p78-81 Oct 1986
AV: UMI
DE: Cognitive-Processes; Elementary-Education; Reader-Text-Relationship; Reading-Strategies; Word-Recognition
DE: *Learning-Activities; *Metacognition-; *Reading-Comprehension; *Reading-Instruction
AB: Argues that teaching students to use pictures in their minds improves their thinking skills. Offers a four step procedure for helping students formulate their own techniques for creating mind pictures. (FL)

AN: EJ311433
AU: Gordon,-Christine-J.
TI: Modeling Inference Awareness across the Curriculum.
PY: 1985
JN: Journal-of-Reading; v28 n5 p444-47 Feb 1985

AV: UMI
DE: Cognitive-Processes; Content-Area-Reading; Reading-Comprehension; Reading-Instruction; Secondary-Education
DE: *Inferences-; *Metacognition-; *Models-; *Reading-Processes; *Teacher-Role; *Teaching-Methods
AB: Describes how a teacher can model the inference process to help students learn to make inferences. (HOD)

AN: EJ342637
AU: Graves,-Anne-W.
TI: Effects of Direct Instruction and Metacomprehension Training on Finding Main Ideas.
PY: 1986
JN: Learning-Disabilities-Research; v1 n2 p90-100 Sum 1986
DE: Elementary-Secondary-Education; Reading-Strategies
DE: *Learning-Disabilities; *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Teaching-Methods
AB: Twenty-four learning disabled children (grades 5-8) with adequate decoding skills, but who demonstrated problems in reading comprehension, received training in finding the main idea. Among several findings was that metacomprehension (self-monitoring) plus direct instruction was more effective than direct instruction alone. (Author/JW)

AN: ED239243
AU: Kaufman,-Nancy-J.; Randlett,-Alice-L.
TI: The Use of Cognitive and Metacognitive Strategies of Good and Poor Readers at the College Level.
PY: 1983
NT: 13 p.; Paper presented at the Annual Meeting of the American Reading Forum (4th, Sarasota, FL, December 8-10, 1983).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Processes; College-Students; Higher-Education; Learning-Strategies; Reading-Research; Reading-Skills; Study-Skills; Teaching-Methods
DE: *Educationally-Disadvantaged; *Metacognition-; *Reading-Ability; *Reading-Comprehension; *Reading-Strategies
AB: To determine if able and disabled college student readers can be distinguished by their awareness and use of metacognitive and cognitive strategies, 36 freshmen students enrolled in a reading and study skills class were classified as either good or poor readers based on their Nelson-Denny Reading Test scores. After reading five short passages and answering comprehension questions, students were interviewed about their reactions to the reading task, past reading experiences, and locus of control. Following the interviews, students completed a questionnaire on their conscious use of strategies. No significant differences were found between high and low comprehenders in use of observable strategies, but large differences occurred in the two groups' use of nonobservable, "in-head" strategies such as

visualizing material. Overall, high comprehenders gave one-third more responses when asked what they did to lessen their confusion. Explanations for these differences might include the lack of direct teaching in higher order thinking skills or the difficulty some students have in assimilating these skills. Remediation might begin with making students aware of their learning strengths and weaknesses and of their cognition. (MM)

AN: ED220821
AU: Kendall,-Janet-Ross; Mason,-Jana-M.
TI: Metacognition from the Historical Context of Teaching Reading. Technical Report No. 263.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1982
NT: 19 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Ability; Elementary-Education; Prior-Learning; Reading-Research
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Teacher-Role; *Teaching-Methods
AB: Much of the current work in reading comprehension features the idea that reading for meaning involves metacognitive activity of comprehension monitoring, which entails keeping track of the success with which one's comprehension is proceeding, ensuring that the process continues smoothly, and taking remedial action if necessary. The resurgence of interest in the topic of reasoning or thinking reflects a paradigm shift in the field of learning psychology. Thus, although metacognition is not a new field of study, the new concepts and methods used in current research should eventually have a greater impact on education than earlier work on the same topic did. There is now sufficient evidence from studies of children that less able readers are not particularly adept at monitoring their understanding of what they listen to or read. Research has shown that approaches teachers can use to improve these children's metacognitive strategies include (1) providing instructions to predict outcomes that require a reader's active involvement and constructive thinking, (2) encouraging children to integrate their prior knowledge with story content, and (3) training students to monitor their understanding by asking themselves questions as they read. Teachers should be cautioned, however, that an overt demonstration of an understanding of metacognitive skills is unnecessary. Rather, the teacher should model good questions, provide examples of strategies students might use, and provide many opportunities to apply the strategies to various types of reading materials. (HOD)

AN: EJ359218
AU: Langer,-Margaret-Anne; Neal,-Judith-Chibante

TI: Strategies for Learning: An Adjunct Study Skills Model.
PY: 1987
JN: Journal-of-Reading; v31 n2 p134-39 Nov 1987
AV: UMI
DE: Content-Area-Reading; Critical-Thinking; Higher-Education; Reading-Comprehension; Reading-Instruction; Reading-Research; Remedial-Reading
DE: *Metacognition-; *Reading-Programs; *Reading-Skills; *Reading-Strategies; *Study-Skills; *Summer-Programs
AB: Describes a prototypical adjunct reading program which was used for two summers with high-risk students about to enter a private, medium-sized university. The program, "Strategies for Learning," provides instruction in 14 specific strategies for comprehending college texts, understanding course syllabi, taking notes, and organizing ideas. (SKC)

AN: EJ382264
AU: Lipson,-Marjorie-Youmans; Wickizer,-Elizabeth-Aslin
TI: Promoting Self-Control and Active Reading through Dialogues.
PY: 1989
JN: Teaching-Exceptional-Children; v21 n2 p28-32 Win 1989
AV: UMI
DE: Elementary-Secondary-Education; Interaction-; Reading-Comprehension; Reading-Processes; Reading-Strategies; Teacher-Student-Relationship; Teaching-Methods
DE: *Dialogs-Language; *Interpersonal-Communication; *Metacognition-; *Reading-Difficulties; *Reading-Instruction; *Teacher-Response
AB: A pattern of teacher-student interactions during reading is presented to illustrate use of an instructional approach which: (1) provides poor readers with information about skills and strategies helpful during real reading tasks, and (2) provides teachers with specific guidelines for focusing instructional efforts on critical reading processes rather than content. (JDD)

AN: EJ349710
AU: Malena,-Richard-F.; Coker,-Karen-J.-Atwood
TI: Reading Comprehension: The Missing Elements.
PY: 1987
JN: Journal-of-Developmental-Education; v10 n3 p24-25,35 Jan 1987
AV: UMI
DE: Cognitive-Processes; Postsecondary-Education; Reading-Instruction
DE: *Cognitive-Development; *Learning-Strategies; *Metacognition-; *Reading-Comprehension; *Remedial-Instruction; *Remedial-Reading
AB: Argues that strategies for overcoming reading comprehension problems should contain the elements of cognitive and metacognitive training. Advocates a reading/learning/study

strategy which involves systematic and deliberate instruction stressing increased comprehension by demonstration and guided practice followed by independent application of the process. (DMM)

AN: EJ272478
AU: Mangano,-Nancy-G.; And-Others
TI: Improving Reading Comprehension through Metacognitive Training.
PY: 1982
JN: Reading-Psychology; v3 n4 p365-74 Oct-Dec 1982
AV: Reprint: UMI
DE: Elementary-Secondary-Education; Reading-Skills; Remedial-Instruction; Remedial-Reading; Small-Group-Instruction; Teaching-Methods; Tutoring-
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Self-Evaluation-Individuals
AB: Argues that metacognitive training in students can help students to remediate comprehension difficulties, to more accurately guage their success as learners, and to view reading as a flexible, thought-provoking process of interaction with text. (HOD)

AN: ED281147
AU: Maria,-Katherine
TI: The Metacognitive Reading Journal: A Tool for Teacher Change.
PY: 1986
NT: 20 p.; Paper presented at the Annual Meeting of the College Reading Association (30th, Knoxville, TN, October 22-26, 1986).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Course-Objectives; Graduate-Study; Learning-Processes; Learning-Strategies; Reading-Processes; Reading-Research; Reading-Skills
DE: *Course-Content; *Metacognition-; *Reading-Comprehension; *Reading-Strategies; *Teaching-Methods
AB: Teachers enrolled in a graduate reading course on the latest research in comprehension and instructional techniques were asked to keep a metacognitive journal instead of writing a traditional term paper. The journal provided the 32 teachers with the opportunity to become aware of the strategies that they use in processing difficult material, specifically, a scholarly article on reading comprehension. The strategies were then examined and classified into three main categories: (1) those related to hypothesis generation (mainly predicting and skimming); (2) those for remediating comprehension difficulties (mainly rereading); and (3) those for holding attention (mainly underlining, annotating, taking notes, and reciting parts aloud). The wide range in length of the teachers' summaries of the article suggested problems in the summarizing directions. What began as a useful classroom assignment has led to a consideration of the

whole issue of what teachers will teach when they model reading and summarizing strategies for their students in the classroom. Future studies will use taped protocols, and will compare strategies used in summarizing long and short texts. (References and directions for the reading journal assignment are included.) (NKA)

AN: ED246408
AU: Mason,-Jana-M.
TI: Acquisition of Knowledge about Reading in the Preschool Period: An Update and Extension. Technical Report No. 318.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1984
NT: 51 p.; Portions of this paper were presented at the Society for Research in Child Development Convention (Detroit, MI, March 1983).
PR: EDRS Price - MF01/PC03 Plus Postage.
DE: Case-Studies; Child-Language; Error-Analysis-Language; Error-Patterns; Language-Acquisition; Preschool-Education; Reading-Comprehension; Reading-Instruction; Research-Methodology; Young-Children
DE: *Cognitive-Development; *Early-Reading; *Knowledge-Level; *Learning-Theories; *Metacognition-; *Reading-Research
AB: Early reading should be studied from three perspectives: the function of print, the form of print, and the conventions of print. In so doing, it may be possible to avoid some of the hazards that have plagued the field, such as unsubstantiated assumptions about beginning reading and how it should be taught, erroneous beliefs that maturation plays an overriding role in learning to read, and shortsighted approaches to assessment of young children's knowledge of and progress in early reading. Two case studies of young children demonstrated how to avoid these hazards. First, they showed that young children are learning about reading before they read, and that if researchers study children's attempts, they will be in a firmer position to offer reading instruction. Second, looking at children's responses with contrasting tasks and with the same task over a period of time helped to demonstrate how reading experiences play a more substantial role in learning to read than does maturation. Third, studying children's patterns and attempts to participate in reading tasks gives richer information about what they are learning than does tabulation of their correct responses. (FL)

AN: EJ364719
AU: Muth,-K.-Denise
TI: Structure Strategies for Comprehending Expository Text.
PY: 1987
JN: Reading-Research-and-Instruction; v27 n1 p66-72 Fall 1987
AV: UMI

DE: Cognitive-Mapping; Expository-Writing; Middle-Schools; Reading-Improvement; Reading-Research; Reading-Skills; Secondary-Education; Teaching-Methods; Thematic-Approach; Vertical-Organization
DE: *Comparative-Analysis; *Content-Area-Reading; *Learning-Strategies; *Metacognition-; *Reading-Comprehension; *Reading-Strategies
AB: Examines three strategies designed to help middle school students use text structures to comprehend expository text: (1) hierarchical summaries, (2) conceptual maps, and (3) thematic organizers. Summarizes advantages and disadvantages of each strategy and recommends that teachers consider the outcomes they want and select the most appropriate strategy for their particular purpose. (SKC)

AN: ED220818
AU: Oliver,-Marvin-E.
TI: Improving Comprehension with Mental Imagery.
PY: 1982
NT: 10 p.; Paper presented at the Annual Meeting of the Washington Organization for Reading Development of the International Reading Association (8th, Seattle, WA, March 1982).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Elementary-Education; Instructional-Improvement; Reading-Processes; Reading-Research; Reading-Skills; Reading-Tests
DE: *Metacognition-; *Reading-Comprehension; *Reading-Improvement; *Visualization-
AB: Three experiments were conducted to determine whether an instructional set for visual imagery would facilitate reading comprehension of elementary school children. In the first experiment, 38 fifth graders randomly assigned to experimental and control groups were given the Durrell-Sullivan Reading Capacity and Achievement tests after the experimental group had been given instructions to visualize what they had heard and read. Raw scores revealed no significant differences between the groups as a whole, but the upper third of the experimental group was favored at the .05 level of significance. A second experiment with 40 randomly assigned fifth and sixth graders confirmed two hypotheses: (1) that when given a comprehension test, the upper third of the readers who had been instructed to visualize would do better than the readers who had just been told that comprehension was going to be tested, and (2) that the mean scores would be the same for both groups. A third experiment with 36 third and fourth graders duplicating the second experiment produced the same results. These findings indicate that teachers should try to help children develop the metacognitive skill of visual imagery as a strategy for improving comprehension. (JL)

AN: EJ315109

AU: Otto,-Wayne
TI: Metacognition and Reading Instruction.
PY: 1985
JN: Journal-of-Reading; v28 n6 p573-75 Mar 1985
AV: UMI
DE: Cognitive-Development; Reading-Research
DE: *Definitions-; *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Schemata-Cognition
AB: Argues that metacognitive development should remain--or become--an aspect of instruction that aims to enhance students' reading comprehension. (HOD)

AN: ED257034
AU: Palincsar,-Annemarie-Sullivan
TI: The Unpacking of a Multi-Component, Metacognitive Training Package.
PY: 1985
NT: 18 p.; Paper presented at the Annual Meeting of the American Educational Research Association (69th, Chicago, IL, March 31-April 4, 1985).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Processes; Junior-High-Schools; Learning-Processes; Reading-Processes; Reading-Skills
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Reading-Strategies; *Remedial-Reading
AB: The ninth in a series of studies to improve the strategies that poor reading comprehenders use to study text began as a training study containing three components: strategies to be taught, instructional mode by which they would be taught, and the metacognitive environment for the instruction. After identifying four strategies that merited investigation, the instructional mode (reciprocal teaching) was selected. The metacognitive environment in which the instruction was instituted was then analyzed, and the basic instructional package was investigated in a series of five studies in which the teacher was either the investigator, a volunteer reading teacher, a recruited reading teacher, or a peer tutor. The setting was a resource room or classroom; the content was either selected expository passages from basal texts or science material; and the students were seventh graders having difficulty in comprehending. Results showed that dialogue and comprehension improved substantially over time. This work suggests that an effective reading instruction program requires the identification of complementary strategies that are modeled by an expert and acquired by the learner in a context reinforcing the usefulness of such strategies. (DF)

AN: EJ368775
AU: Palincsar,-Annemarie-Sullivan; Ransom,-Kathryn

TI: From the Mystery Spot to the Thoughtful Spot: The Instruction of Metacognitive Strategies.
PY: 1988
JN: Reading-Teacher; v41 n8 p784-89 Apr 1988
AV: UMI
NT: Special Issue: Poor Readers in the Classroom.
DE: Elementary-Education; Reading-Comprehension; Reading-Instruction; Reading-Skills
DE: *Metacognition-; *Reading-Difficulties; *Reading-Strategies
AB: Suggests that poor readers have less metacognitive knowledge than skilled readers and fail to use effective reading strategies. Provides guidelines for teaching reading strategies. (ARH)

AN: EJ289063
AU: Pearson,-P.-David; Gallagher,-Margaret-C.
TI: The Instruction of Reading Comprehension.
PY: 1983
JN: Contemporary-Educational-Psychology; v8 n3 p317-44 Jul 1983
AV: UMI
DE: Advance-Organizers; Elementary-Secondary-Education; Learning-Strategies; Reading-Research
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction
AB: The existing literature on reading comprehension instruction is organized and reviewed. The authors question whether explicit training to improve comprehension or monitoring strategies should be offered, since these behaviors improve with maturity and experience and in the absence of any apparent training, but conclude that it is possible that instruction accelerates such growth. (Author/LC)

AN: EJ297946
AU: Raphael,-Taffy-E.; McKinney,-Jean
TI: An Examination of Fifth- and Eighth-Grade Children's Question-Answering Behavior: An Instructional Study in Metacognition.
PY: 1983
JN: Journal-of-Reading-Behavior; v15 n3 p67-86 1983
AV: UMI
DE: Cognitive-Processes; Elementary-Secondary-Education; Grade-5; Grade-8; Reading-Instruction; Reading-Strategies
DE: *Metacognition-; *Prior-Learning; *Questioning-Techniques; *Reading-Comprehension; *Reading-Research
AB: Examines the effects of a 10-week program designed to heighten fifth- and eighth-grade students' awareness of information explicitly stated in text, implied by text, and found only in the individual's knowledge base. (FL)

AN: EJ296742

AU: Sanacore,-Joseph
TI: Metacognition and the Improvement of Reading: Some Important Links.
PY: 1984
JN: Journal-of-Reading; v27 n8 p706-12 May 1984
AV: UMI
DE: Educational-Theories; Reading-Research; Secondary-Education; Teaching-Methods
DE: *Cognitive-Processes; *Metacognition-; *Reading-Comprehension; *Reading-Improvement; *Reading-Instruction; *Schemata-Cognition
AB: Reviews some theory and research related to metacognition and reading as well as classroom strategies such as generating good comprehension questions during reading, monitoring and resolving comprehension blocks, applying study procedures that increase comprehension and retrieval of information, and adhering to an author's text structure. (FL)

AN: EJ341267
AU: Schewel,-Rosel-H.; Waddell,-Julia-G.
TI: Metacognitive Skills: Practical Strategies.
PY: 1986
JN: Academic-Therapy; v22 n1 p19-25 Sep 1986
AV: UMI
DE: Elementary-Secondary-Education; Questioning-Techniques; Teaching-Methods
DE: *Learning-Disabilities; *Metacognition-; *Reading-Comprehension; *Reading-Skills; *Student-Role
AB: Four strategies effective in helping learning disabled students develop specific skills necessary for effective reading comprehension are described: (1) self questioning, (2) lookback strategies, (3) use of a code, and (4) inference modeling. The procedures are designed to shift students from a passive to an active role in reading. (CL)

AN: EJ341096
AU: Schmitt,-Maribeth-Cassidy; Baumann,-James-F.
TI: How to Incorporate Comprehension Monitoring Strategies into Basal Reader Instruction.
PY: 1986
JN: Reading-Teacher; v40 n1 p28-31 Oct 1986
AV: UMI
DE: Basal-Reading; Elementary-Education; Learning-Activities
DE: *Cognitive-Processes; *Directed-Reading-Activity; *Metacognition-; *Reading-Comprehension; *Reading-Instruction
AB: Describes how teachers can incorporate the use of comprehension monitoring activities into the guided reading phase of basal reading instruction. (FL)

AN: ED268477
AU: Shanahan,-Timothy
TI: The Shared Knowledge of Reading and Writing.
PY: [1984]
NT: 14 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Elementary-Education; Grade-2; Grade-5; Memory-; Phonics-; Reading Comprehension; Sentence-Structure; Syntax-; Vocabulary Development
DE: *Cognitive-Processes; *Educational-Research; *Knowledge-Level; *Measures-Individuals; *Metacognition-; *Reading-Writing-Relationship
AB: To determine whether reading and writing are as closely related as commonly supposed, a study estimated the amount of overlap that exists between several components of reading and writing knowledge. Data were obtained from 256 second graders and 251 fifth graders. Reading measures included tests of phonics (word knowledge), vocabulary (lexical knowledge), sentence comprehension (syntactic knowledge), and passage comprehension (organizational or structural knowledge). Writing measures included assessments of spelling ability (word knowledge), vocabulary diversity (lexical knowledge), sentence structure complexity (syntactic knowledge), and story grammar structure (organizational or structural knowledge). In all, there were eight writing measures and four reading measures. Each measure was used as a dependent variable in a separate multiple regression analysis. Results did not support the idea that reading and writing are identical in terms of underlying knowledge. The correlations between the reading and writing variables were significant, but they were much lower than would be expected given the assumptions regarding the relationship between reading and writing. (HOD)

AN: EJ304976
AU: Short,-Elizabeth-Jane; Ryan,-Ellen-Bouchard
TI: Metacognitive Differences Between Skilled and Less Skilled Readers: Remediating Deficits Through Story Grammar and Attribution Training.
PY: 1984
JN: Journal-of-Educational-Psychology; v76 n2 p225-35 Apr 1984
AV: UMI
NT: This study was in partial fulfillment of the Ph.D. requirements at the University of Notre Dame and was supported by National Institute of Education Grant G-80-0134 and National Institute of Child Health and Human Development Grant T32-HD078-2.
DE: Aptitude-Treatment-Interaction; Attribution-Theory; Comparative-Analysis; Elementary-Education; Grade-4; Males-; Reading-Comprehension; Remedial-Instruction; Retention-Psychology
DE: *Low-Achievement; *Metacognition-; *Reading-Ability; *Reading-Strategies

AB: An intervention program, consisting of story grammar training and/or attribution training, was designed to remediate the failure of poor readers to use metacognitive skills. Using 42 fourth-grade poor readers in three different treatment groups, results showed strategic training produced dramatic gains in reading comprehension. (BS)

AN: EJ289470
AU: Stewart,-Oran; Tei,-Ebo
TI: Some Implications of Metacognition for Reading Instruction.
PY: 1983
JN: Journal-of-Reading; v27 n1 p36-43 Oct 1983
AV: UMI
DE: Cognitive-Processes; Reading-Comprehension; Secondary-Education; Teaching-Methods
DE: *Metacognition-; *Reading-Instruction; *Reading-Research; *Reading-Skills
AB: Reviews the research on the relationship of metacognition to fluent reading and offers techniques for developing knowledge of and fluency in reading. (AEA)

AN: ED262378
AU: Tei,-Ebo; Stewart,-Oran
TI: Effective Studying from Text: Applying Metacognitive Strategies.
PY: 1985
JN: Forum-for-Reading; v16 n2 p46-55 Spr-Sum 1985
NT: 12 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Ability; Content-Area-Reading; Higher-Education; Questioning-Techniques; Secondary-Education
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Reading-Strategies; *Study-Skills; *Teaching-Methods
AB: To be effective learners, students should know about the state or level of their learning and the success of the strategies they are using, so that when they misunderstand a concept they can do additional reading or consult outside sources. Traditionally, textbook study has been taught through the use of so-called formula techniques, where the formula represents a step-by-step approach to studying the text. In place of this blind training, students should have self-control training or training with cognitive awareness (metacognition). The important elements for any effective studying include (1) having specific purposes or goals for the study session, (2) recognizing the inherent structure of the reading material, (3) purposefully extracting information, and (4) assessing the knowledge gained. Two metacognitive strategies that can be taught easily to students are self-questioning and summarization. In teaching self-questioning, the student must be made aware that

before any portion of text is read at all some pertinent questions must be asked to provide context for extracting meaning. In summarizing, students learn to use in-depth processing of the more important ideas in the text and to check what has been gained up to that point. (HOD)

AN: ED252815
AU: Thomas,-Louise
TI: Readers' Metacognition and Comprehension: Are They Related?
PY: 1984
NT: 16 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Processes; Grade-6; Intermediate-Grades; Reading-Instruction; Reading-Processes; Schemata-Cognition
DE: *Academic-Aptitude; *Metacognition-; *Reading-Attitudes; *Reading-Comprehension; *Reading-Research; *Reading-Strategies
AB: A study investigated the relationship between sixth grade students' reading attitudes and awareness of certain parameters of reading and their performance on a reading comprehension test. Subjects, 100 students scoring between the 5th and the 95th percentiles on the Iowa Tests of Basic Skills (ITBS) comprehension section, completed a reading attitude and awareness inventory prepared especially for the study. Pearson Product-Moment Correlations and two-sample t-tests were used to determine differences between the performance of good and poor readers on the inventory. A significant correlation was found between scores on the inventory and the ITBS, confirming (1) the relationship between the defined components of reading schemata (attitude, knowledge, and self-concept) and reading comprehension, and (2) differences in the way good and poor readers perceive the reading task. Poor readers were found to be relatively unaware of reading as a search for meaning or of strategies necessary for proficiency. (A copy of the attitude and awareness inventory is appended). (FL)

AN: ED226321
AU: Tierney,-Robert-J.
TI: Learning from Text. Reading Education Report No. 37.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1983
NT: 22 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Independent-Reading; Instructional-Improvement; Reading-Processes; Reading-Research; Relevance-Education; Secondary-Education
DE: *Cognitive-Processes; *Metacognition-; *Reading-Comprehension; *Reading-Skills; *Skill-Development
AB: Students must develop self-monitoring abilities if they are to successfully transfer knowledge and strategies they are taught

to their own reading. But first, teachers must know just what this knowledge and these strategies are and how they can be presented to students. Akin to model building, reading comprehension involves a variety of behaviors and self-regulating strategies aimed at developing an interpretation that is plausible, complete, interrelated, and coherent. Studies suggest that secondary school students either lack these abilities and awarenesses or fail to use them. Other studies, however, suggest that knowledge and strategies can be successfully taught if teachers consider five things: (1) relevance--the skill or ability is worth teaching; (2) explicitness--students should be informed why, when, where, and how to use specific strategies; (3) student as informant--students should explore strategies for themselves; (4) self-regulation--students must be moved beyond situations where they depend on the teacher; and (5) application--students must be given situations that stimulate the transfer tasks to which they are expected to put these skills, strategies, and awarenesses. (JL)

AN: EJ279348
AU: Wagoner,-Shirley-A.
TI: Comprehension Monitoring: What It Is and What We Know About It.
PY: 1983
JN: Reading-Research-Quarterly; v18 n3 p328-46 Spr 1983
AV: Reprint: UMI
DE: Reading-Instruction; Research-Needs
DE: *Educational-Theories; *Metacognition-; *Reading-Comprehension; *Reading-Research; *Research-Methodology
AB: Defines comprehension monitoring as a metacognitive process that is affected by person, strategy, and task variables. Reviews research in the area and draws conclusions based on that research. (FL)

AN: EJ345120
AU: Wham,-Mary-Ann
TI: Metacognition and Classroom Instruction.
PY: 1986
JN: Reading-Horizons; v27 n2 p95-102 Win 1986
AV: UMI
DE: Communication-Skills; Elementary-Secondary-Education; Reading-Ability; Teaching-Methods
DE: *Cognitive-Processes; *Learning-Theories; *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Reading-Research
AB: Reviews recent research on metacognition and presents some implications for its use in the classroom. (FL)

AN: ED244237
AU: Wingenbach,-Nancy-Gard

TI: Gifted Readers: Comprehension Strategies and Metacognition.
PY: [1982]
NT: 39 p.
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Academic-Aptitude; Age-Differences; Comparative-Analysis; Elementary-Secondary-Education; Reading-Processes
DE: *Academically-Gifted; *Cognitive-Processes; *Metacognition-; *Reading-Comprehension; *Reading-Research; *Reading-Strategies
AB: A study investigated the reading comprehension processes of gifted readers, specifically their use of comprehension strategies and their metacognitive awareness. Grade level differences in strategy use and metacognitive awareness were also examined. A standardized reading test and a metacognition questionnaire were administered to 100 gifted students in grades 4, 5, 6, and 7. Twenty students, five from each grade, were selected from this group to participate in protocol analysis and interviews. The results indicated that gifted readers used specific reading and reasoning strategies in the comprehension process. Gifted readers were also metacognitively aware of the strategies available to them, of ways to select and use the strategies, and of the effectiveness of the strategies they applied. Grade level differences in strategy use and metacognitive awareness were minimal. (Appendixes contain examples from the protocol analyses and a list of interview questions and responses.) (FL)

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